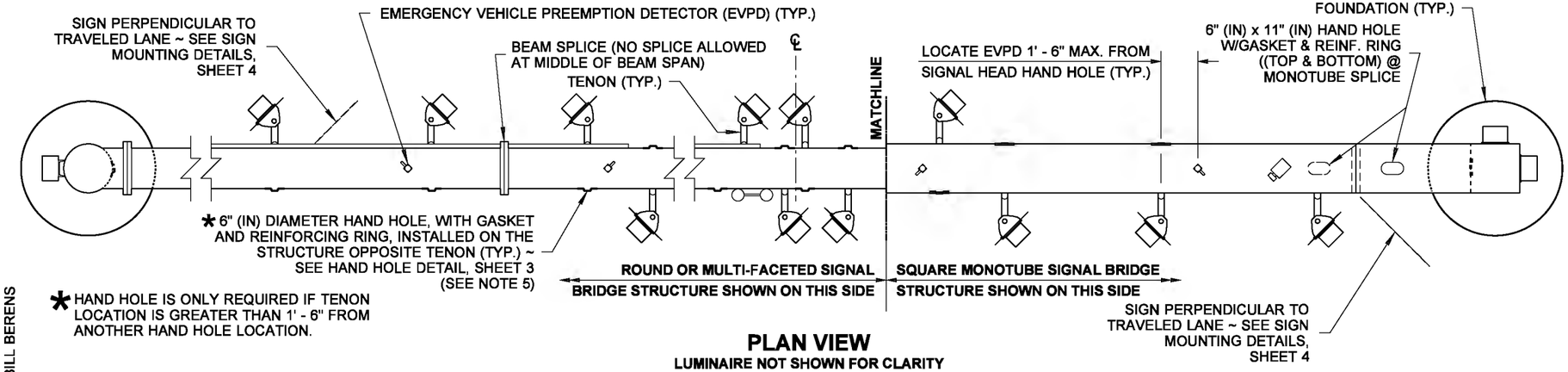

PLAN VIEW

LUMINAIRE NOT SHOWN FOR CLARITY

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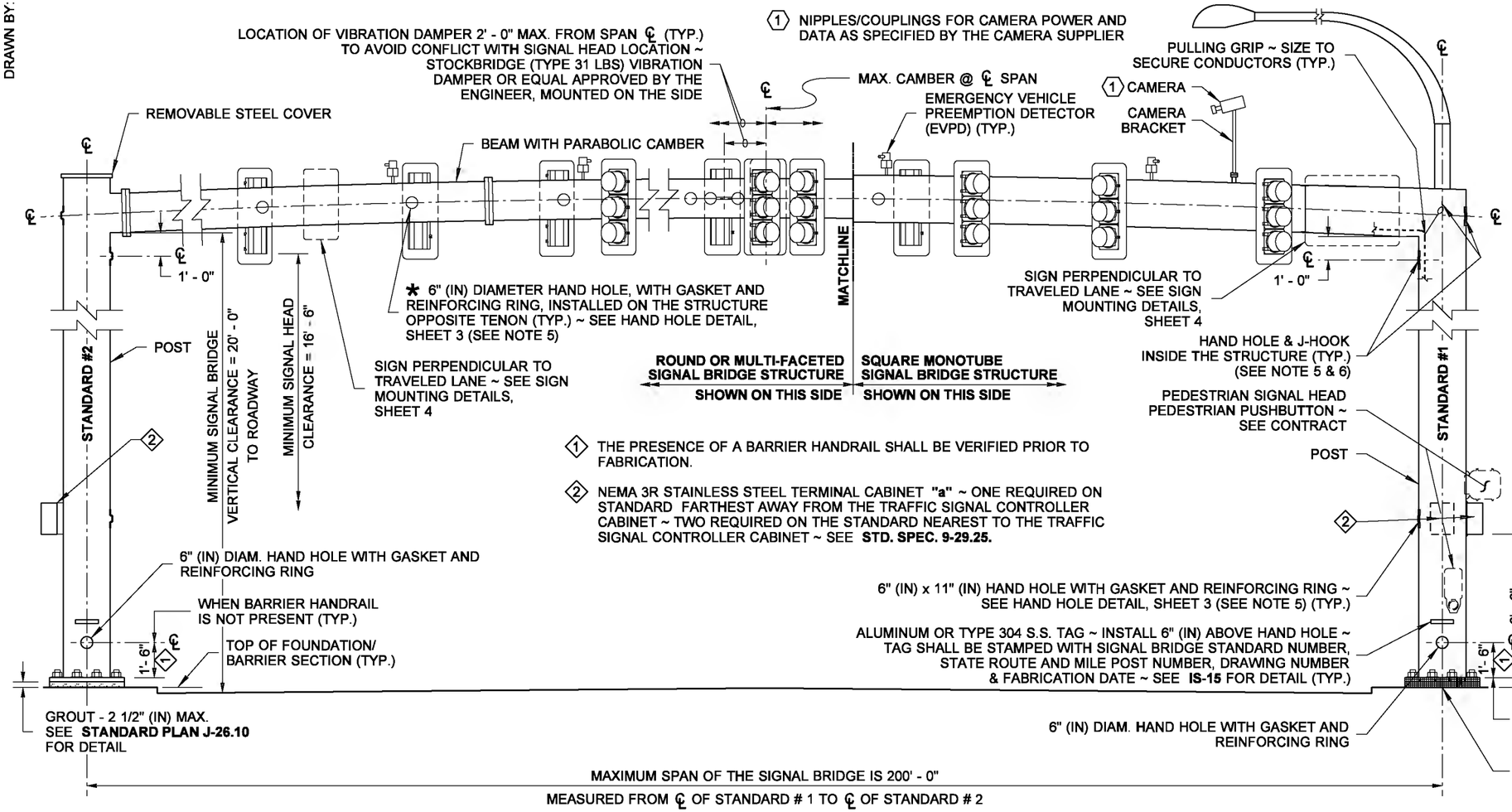

ELEVATION VIEW

DESIGN CRITERIA

SIGNAL BRIDGE SHALL BE DESIGNED AND ANALYZED IN ACCORDANCE WITH **AASHTO STANDARD SPECIFICATION FOR STRUCTURAL SUPPORTS FOR HIGHWAY SIGNS, LUMINAIRE AND TRAFFIC SIGNAL - FIFTH EDITION - DATED 2009** AND INTERIMS. USING BASIC WIND SPEED OF **90 MPH** AND **50 YEARS** OF DESIGN LIFE. FATIGUE DESIGN OF THE STRUCTURE CONFORMS TO **FATIGUE CATEGORY I** OF THE SPECIFIED AASHTO STANDARD SPECIFICATION.

NOTES

1. Typical view shown. See Contract Plans for quantities and locations of signal heads, EVP detectors, cameras, and signs.
2. Route signal cable(s) from terminal cabinet along inside bottom of the Signal Bridge to the Tenon(s) connector(s) at hand hole(s). Provide sufficient slack wire to allow the conductor or cable to be pulled a minimum of 18" (in) outside the Signal Bridge at the nearest hand hole to the equipment connection point.
3. All conductors shall be labeled in accordance with **Standard Specification 8-20.3(8)**. Labels shall be provided at the terminal cabinet (at the terminal board and conduits), equipment terminals, and at the hand hole nearest equipment connection point.
4. All RMC conduits embedded in foundation shall be terminated with a grounding end bushing and bonded to the structure grounding terminal. All PVC conduits embedded in foundations shall be terminated with end bell bushing.
5. Hand holes shall be installed at the time of fabrication.
6. Install hand hole on outside of the post at beam level when foundation is cast at grade. Install hand hole on traffic side of post when signal bridge is mounted on bridge, retaining wall or other structure.
7. Grounding conductor shall be non-insulated # 4 AWG copper with 3' (ft) minimum slack. Clamp to horizontal steel reinforcing with a listed connector suitable for use embedded in concrete. For details, see Elevation View Signal Bridge Hand Hole Placement on Standard, Sheet 2. Or see Foundation Detail in Bridge Deck or Bridge Deck Island, Sheet 2.
8. Grounding conductor shall be non-insulated #4 AWG copper with 3' (ft) minimum slack. Clamp to vertical steel reinforcing with a listed connector suitable for use embedded in concrete. For Detail, see Partial Foundation Detail, Sheet 2.
9. Signal bridge foundation shall be designed by the Engineer of Record for all installations (at grade, mounted on a bridge structure or on a wall structure).
10. Variable Message Signs (VMS) shall not be installed on signal bridge.
11. No sign larger than 12' (ft) long x 4' (ft) tall shall be installed on signal bridge.

THEODORE JOSEPH BAILEY — STATE OF WASHINGTON — 39820 — REGISTERED PROFESSIONAL ENGINEER

Bailey, Ted
Jun 11 2014 9:58 AM

SIGNAL BRIDGE STANDARD ELECTRICAL DETAILS

STANDARD PLAN J-75.41-00

SHEET 1 OF 4 SHEETS

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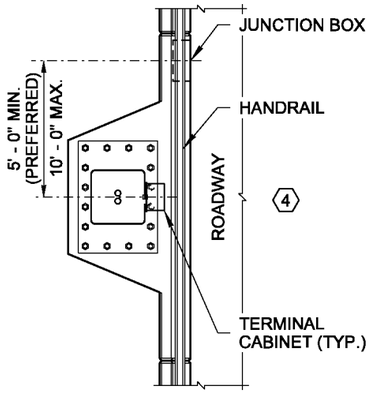
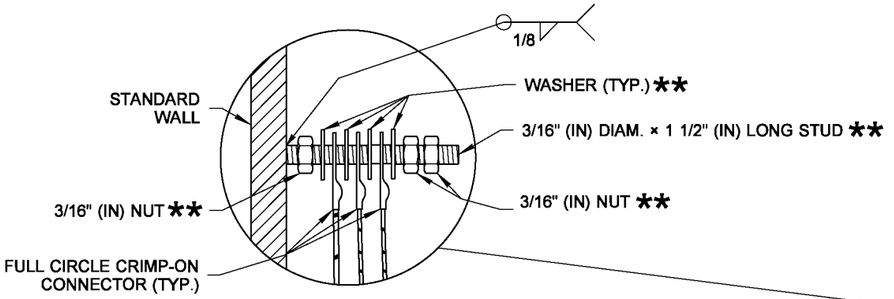
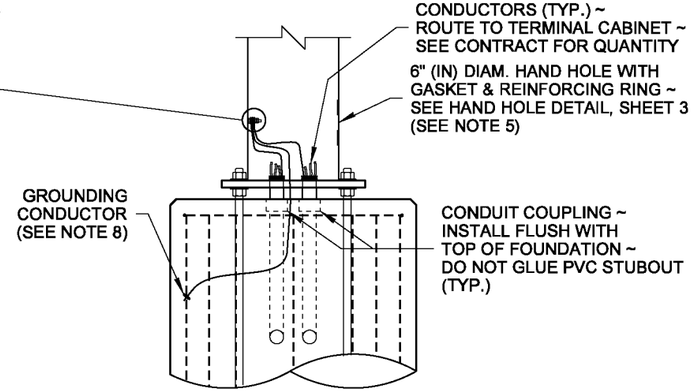


PLAN VIEW



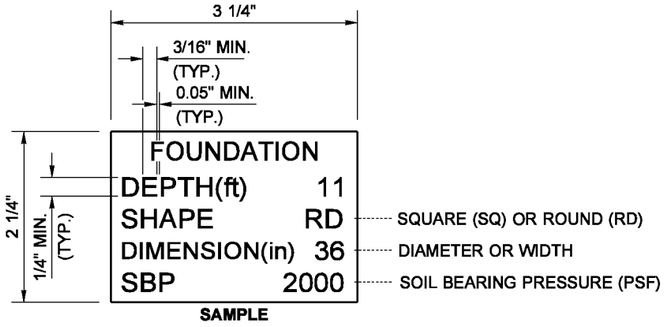
CONFIGURATIONS VARY AMONG MANUFACTURERS (SHOWN EXPLODED FOR CLARITY)

** BOLTS, NUTS, AND WASHERS ~ ASTM F593 OR A193 TYPE 304 OR TYPE 316 STAINLESS STEEL (S.S.)



PARTIAL FOUNDATION DETAIL

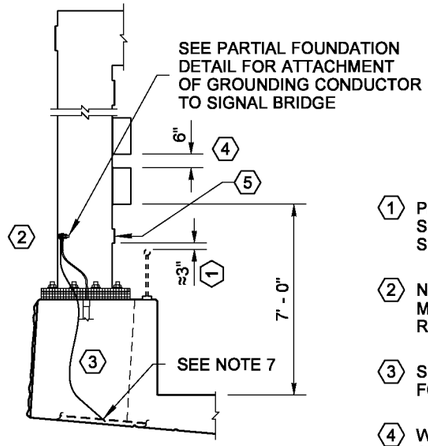
(GROUT PAD/SCREEN NOT SHOWN FOR CLARITY)



SAMPLE

SIGNAL FOUNDATION IDENTIFICATION TAG DETAIL

TEXT SHALL BE ENGRAVED 0.014" (IN) DEEP

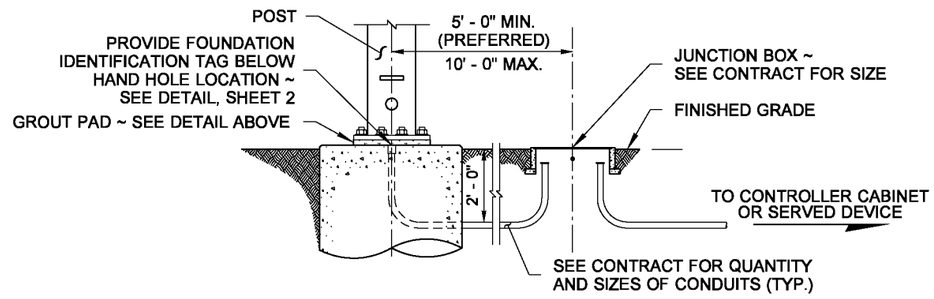


ELEVATION VIEW

WITH HANDRAIL

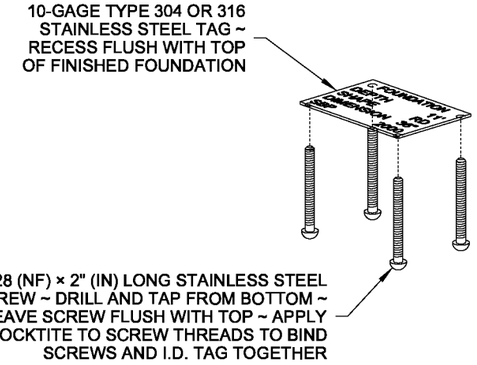
(SQUARE MONOTUBE SHOWN ~ ROUND OR MULTI-FACETED SIMILAR)

1. PRESENCE OF A BARRIER HANDRAIL SHALL BE VERIFIED PRIOR TO SIGNAL BRIDGE FABRICATION
2. NO TERMINAL CABINET SHALL BE MOUNTED ON SIDE OPPOSITE THE ROADWAY
3. SEE BRIDGE SHEETS FOR FOUNDATION DESIGN
4. WHEN SIGNAL BRIDGE IS MOUNTED ON A STRUCTURE TERMINAL CABINETS SHALL BE MOUNTED ON THE TRAFFIC SIDE OF THE POST AS SHOWN
5. 6" (IN) DIAM. HAND HOLE WITH GASKET AND REINFORCING RING

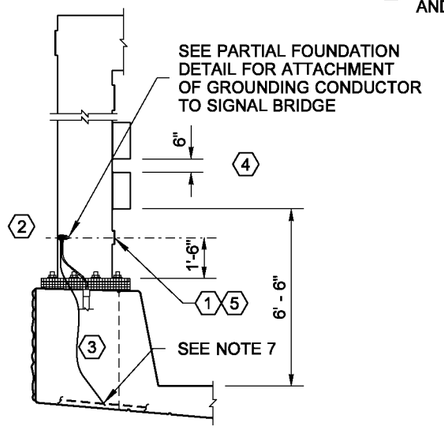


SEE **STANDARD PLAN J-26.15** FOR FOUNDATION PLACEMENT DETAILS

PARTIAL FOUNDATION TO JUNCTION BOX DETAIL



IDENTIFICATION TAG DETAIL

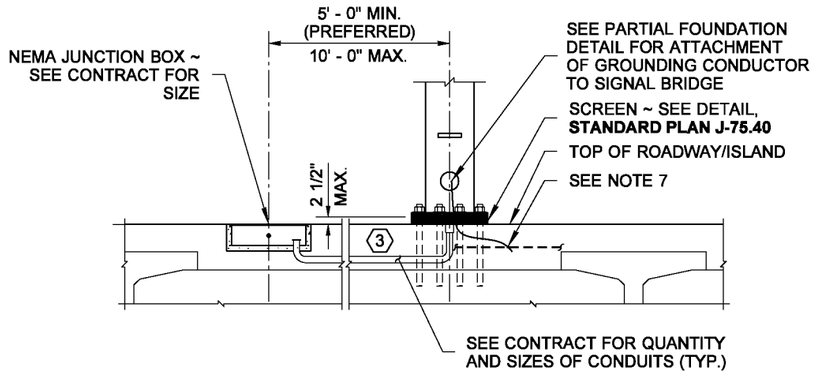


ELEVATION VIEW

WITHOUT HANDRAIL

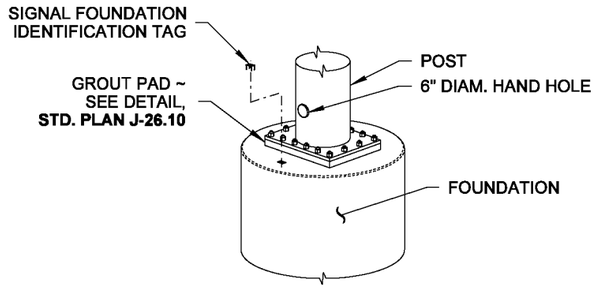
(SQUARE MONOTUBE SHOWN ~ ROUND OR MULTI-FACETED SIMILAR)

SIGNAL BRIDGE HAND HOLE PLACEMENT ON STANDARD



FOUNDATION DETAIL ON BRIDGE - CROSS BEAM

(NO FOUNDATION ALLOWED ON BRIDGE DECK)



PARTIAL SIGNAL FOUNDATION DETAIL

(ROUND OR MULTI-FACETED SHOWN ~ SQUARE MONOTUBE SIMILAR)

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Bailey, Ted
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SIGNAL BRIDGE STANDARD ELECTRICAL DETAILS

STANDARD PLAN J-75.41-00

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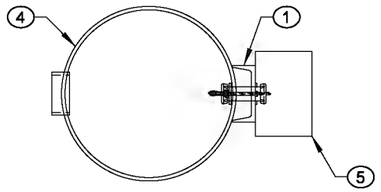
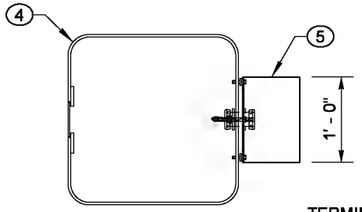
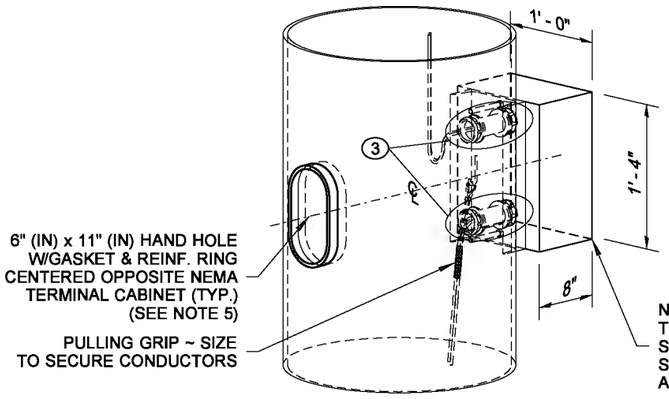


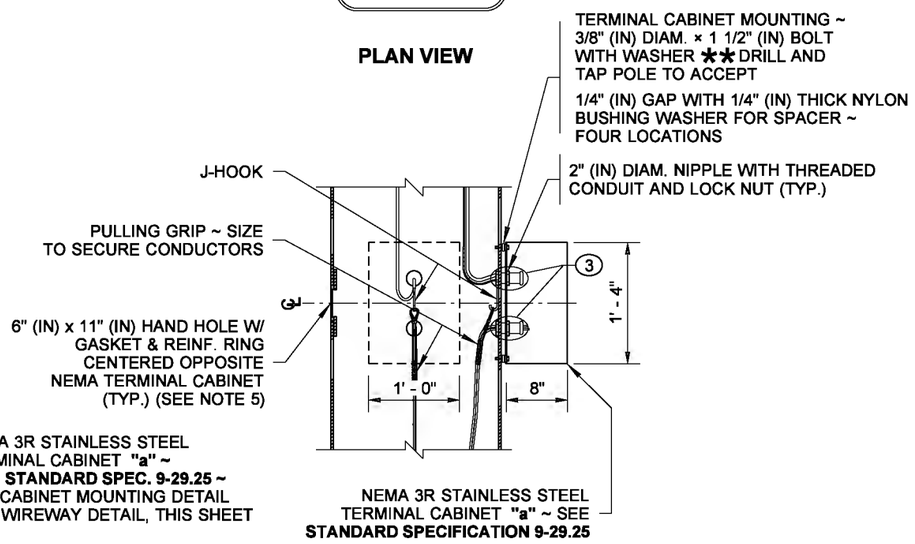
PLAN VIEW



PLAN VIEW



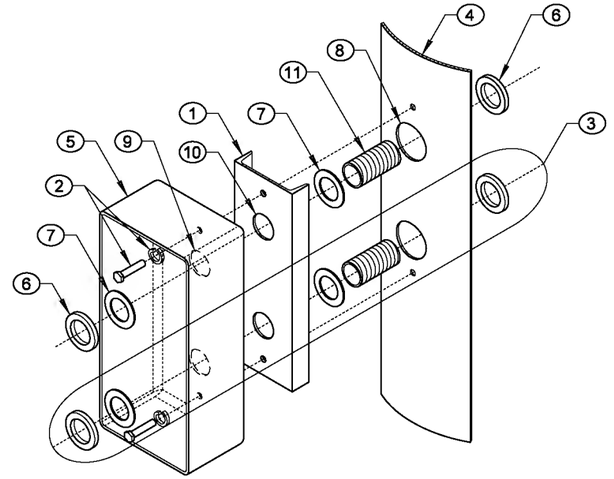
MULTI-SIDED (ROUND) TERMINAL CABINET MOUNTING DETAIL



SQUARE TUBE SHOWN.
FOR MULTI-SIDED (ROUND) MONOTUBE STRUCTURE ~
ATTACH TERMINAL CABINET AS DETAILED
PER MULTI-SIDED (ROUND) TERMINAL CABINET MOUNTING DETAIL

SECTION @ TERMINAL CABINET

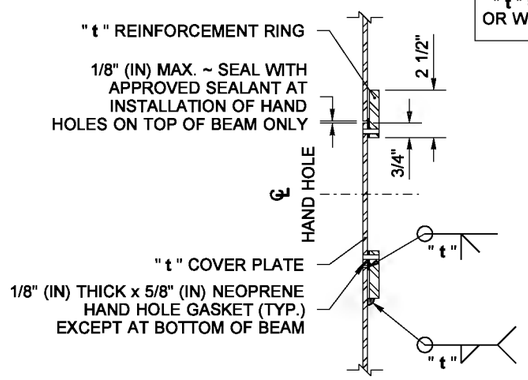
SQUARE MONOTUBE CABINET MOUNTING DETAIL



WIREWAY DETAIL
ISOMETRIC VIEW

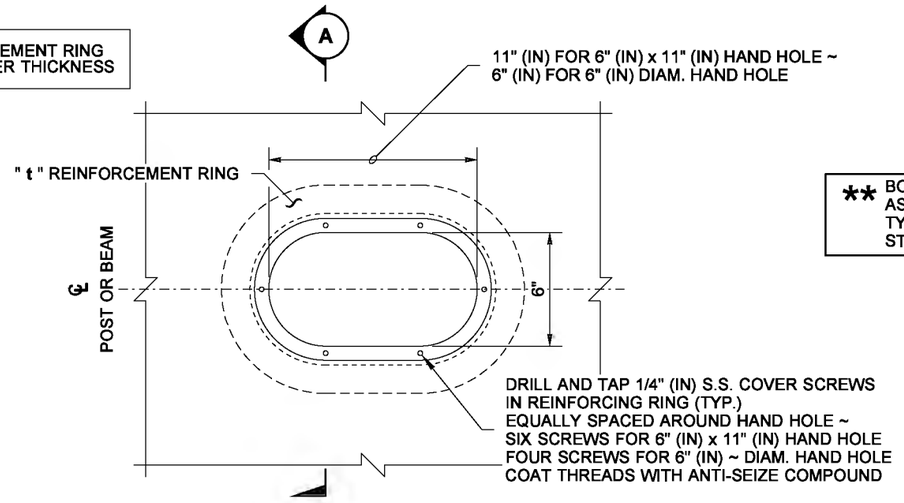
KEY NOTES

1. 6 × 8.2 LB/FT CHANNEL ~ HOT-DIP GALVANIZED
2. TWO EACH:
   - 1/2-13 NC × 2 1/2" (IN) HEX HEAD BOLT **
   - LOCK WASHERS (DRILL AND TAP POLE TO ACCEPT) **
3. WIREWAY (SEE DETAIL THIS SHEET)
4. METAL POST
5. CABINET
6. END BUSHING (TYP.)
7. SEALING LOCKNUT (TYP.)
8. POLE WALL DRILLED SO BUSHING WILL PASS THROUGH (TYP.)
9. CABINET WITH BACK WALL DRILLED 1/8" (IN) OVERSIZE OF NIPPLE (TYP.)
10. CHANNEL DRILLED 1/8" (IN) OVERSIZE OF NIPPLE (TYP.)
11. 2" (IN) DIAM. × 4" (IN) NIPPLE (UNLESS OTHERWISE NOTED) (TYP.)



SECTION (A)

" t " = MATCH REINFORCEMENT RING OR WELD SIZE TO MEMBER THICKNESS



6" (IN) x 11" (IN) HAND HOLE SHOWN
6" (IN) DIAM. HAND HOLE SIMILAR EXCEPT AS SHOWN

BEAM HAND HOLE DETAIL

** BOLTS, NUTS, AND WASHERS ~ ASTM F593 OR A193 TYPE 304 OR TYPE 316 STAINLESS STEEL (S.S.)

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Bailey, Ted
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SIGNAL BRIDGE STANDARD ELECTRICAL DETAILS

STANDARD PLAN J-75.41-00

SHEET 3 OF 4 SHEETS

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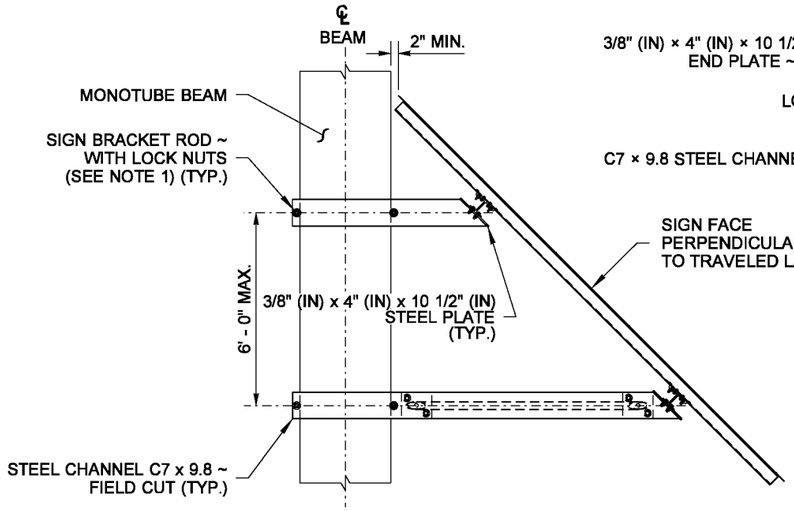
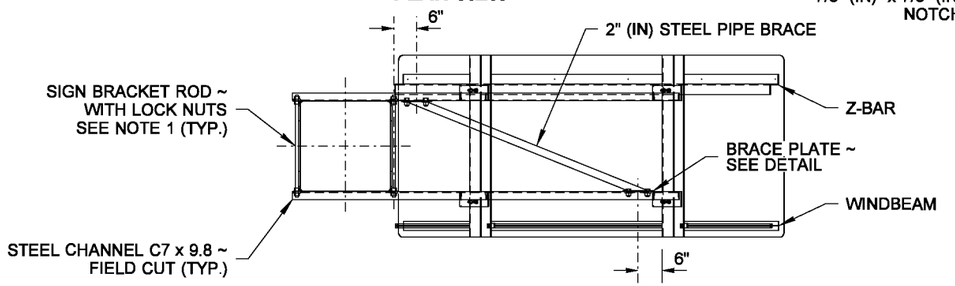
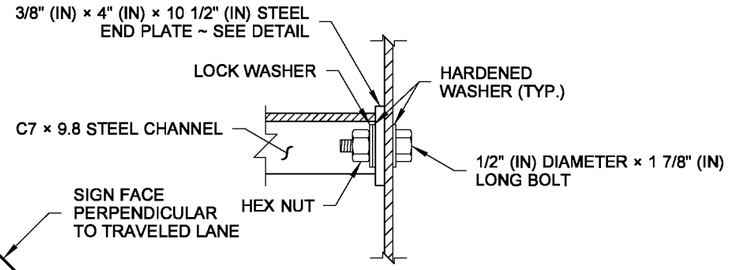
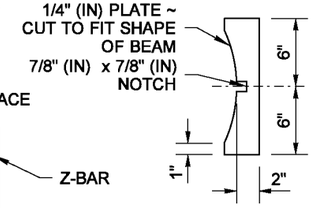


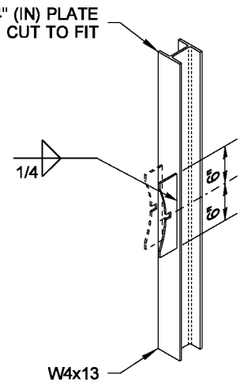
PLAN VIEW



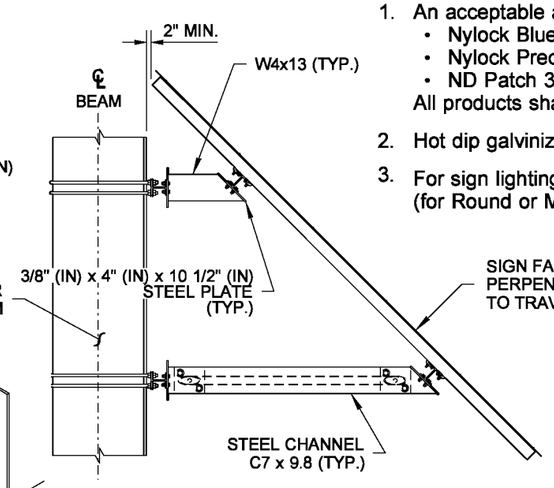


BOLT DETAIL

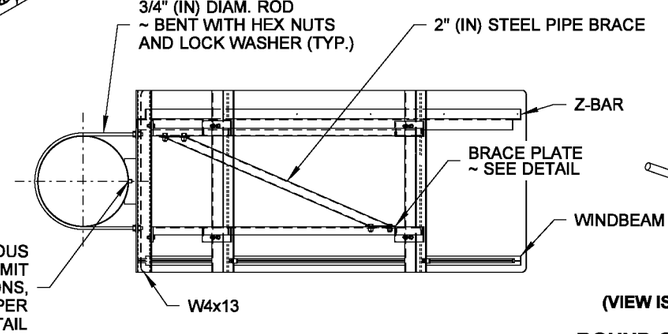


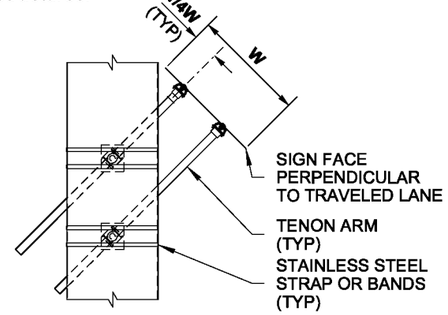


STIFFENER PLATE DETAIL

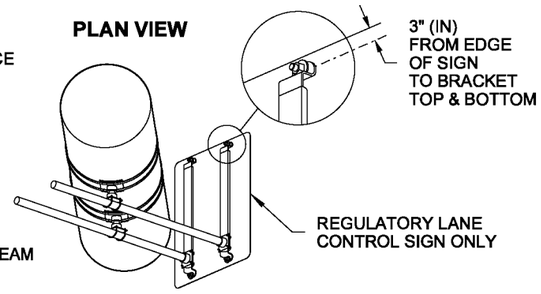


PLAN VIEW





PLAN VIEW



OBLIQUE VIEW
(VIEW IS FROM BELOW LOOKING UP)

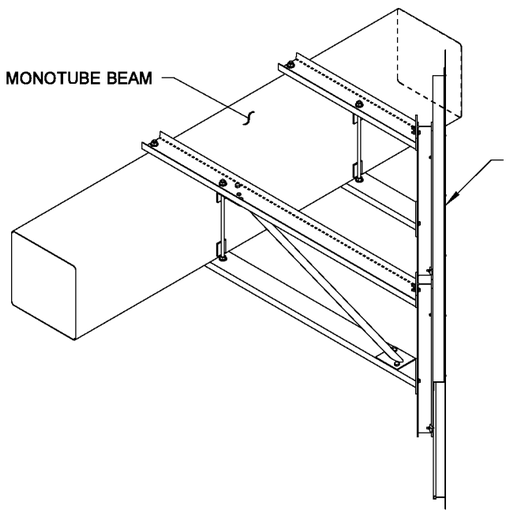
SIGN MOUNTING NOTES

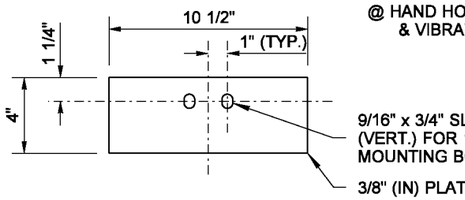
1. An acceptable alternative to a Locknut w/nylon insert shall be as follows:
   - Nylock Blue Nylon Torque-Patch
   - Nylock Precote 30
   - ND Patch 360 Ring Patch

   All products shall be applied the full length of the bolt threads with 360° coverage.
2. Hot dip galvinize all non-stainless parts.
3. For sign lighting details, See **Standard Plans J-75.40** (for Monotube) and **J-75.45** (for Round or Multi-sided) structures.

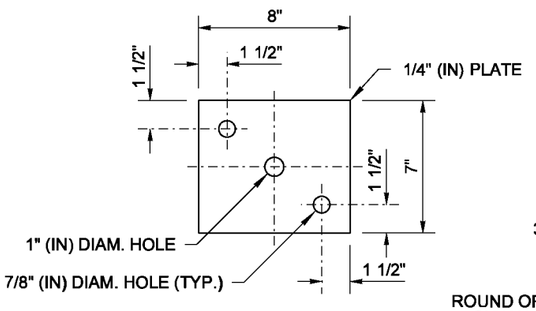
ROUND OR MULTI-SIDED SIGNAL BRIDGE SIGN MOUNTING DETAILS FOR SMALL SIGN
(FOR SIGNS - 36" (IN) x 36" (IN) OR LESS)

ELEVATION VIEW





END PLATE DETAIL

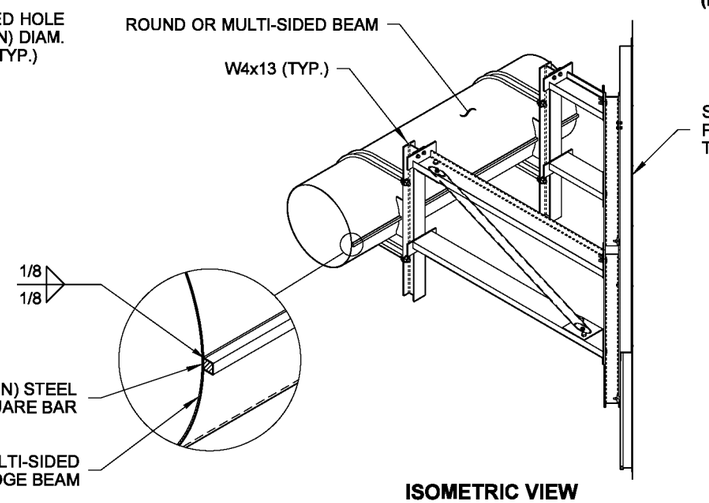


BRACE PLATE DETAIL

ISOMETRIC VIEW
MONOTUBE SIGNAL BRIDGE SIGN MOUNTING DETAILS
(SKEWED SIGN DETAIL)

REFER TO STANDARD PLAN G-90.20 FOR ADDITIONAL DETAILING NOT SHOWN

ELEVATION VIEW



ISOMETRIC VIEW

ROUND OR MULTI-SIDED SIGNAL BRIDGE SIGN MOUNTING DETAILS FOR LARGE SIGN
(FOR SIGNS - 4' (FT) x 12' (FT) OR LESS)

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39820
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